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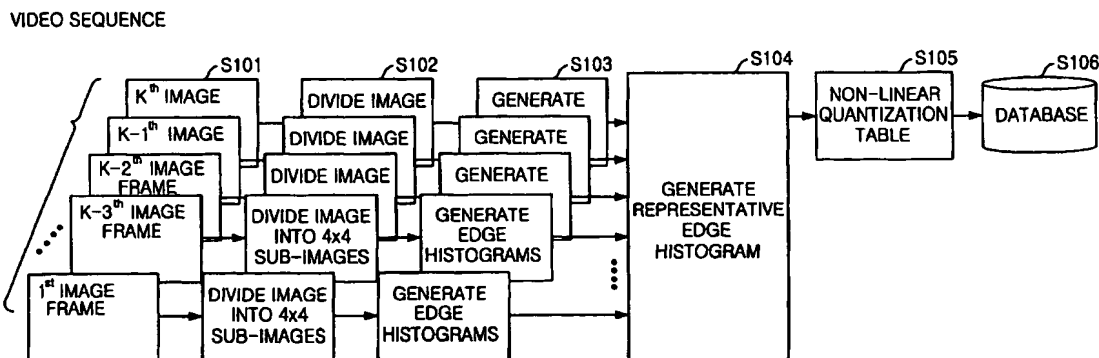
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- (71) Applicant (*for all designated States except US*): ELEC-TRONICS AND TELECOMMUNICATIONS RE-SEARCH INSTITUTE [KR/KR]; 161, Gajeong-dong, Yuseong-gu, Daejon 305-350 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): PARK, Sung-Hee [KR/KR]; #105-104, Daerim Doore Apt., Sinsung-dong, Yuseong-gu, Daejon 305-720 (KR). PARK, Soo-Jun [KR/KR]; #203-501, Hyundai Apt., 477 Apgujeong-dong, Gangnam-gu, Seoul 135-903 (KR). JANG, Myung-Gil [KR/KR]; #103-504, Dasol Apt., Gung-dong, Yuseong-gu, Daejon 305-335 (KR). PARK, Sang-Kyu [KR/KR]; #105-1305, Hanmaeul Apt., Songgang-dong, Yuseong-gu,
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(54) Title: NON-LINEAR QUANTIZATION AND SIMILARITY MATCHING METHODS FOR RETRIEVING VIDEO SEQUENCE HAVING A SET OF IMAGE FRAMES

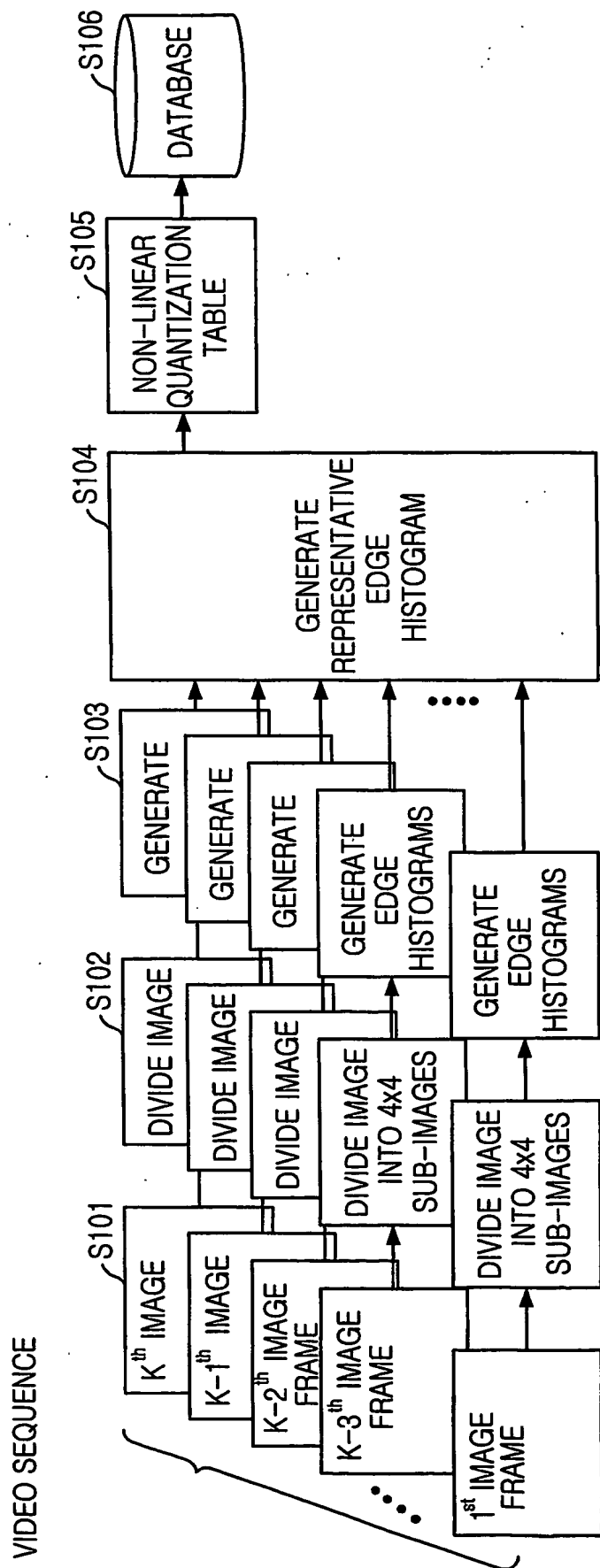


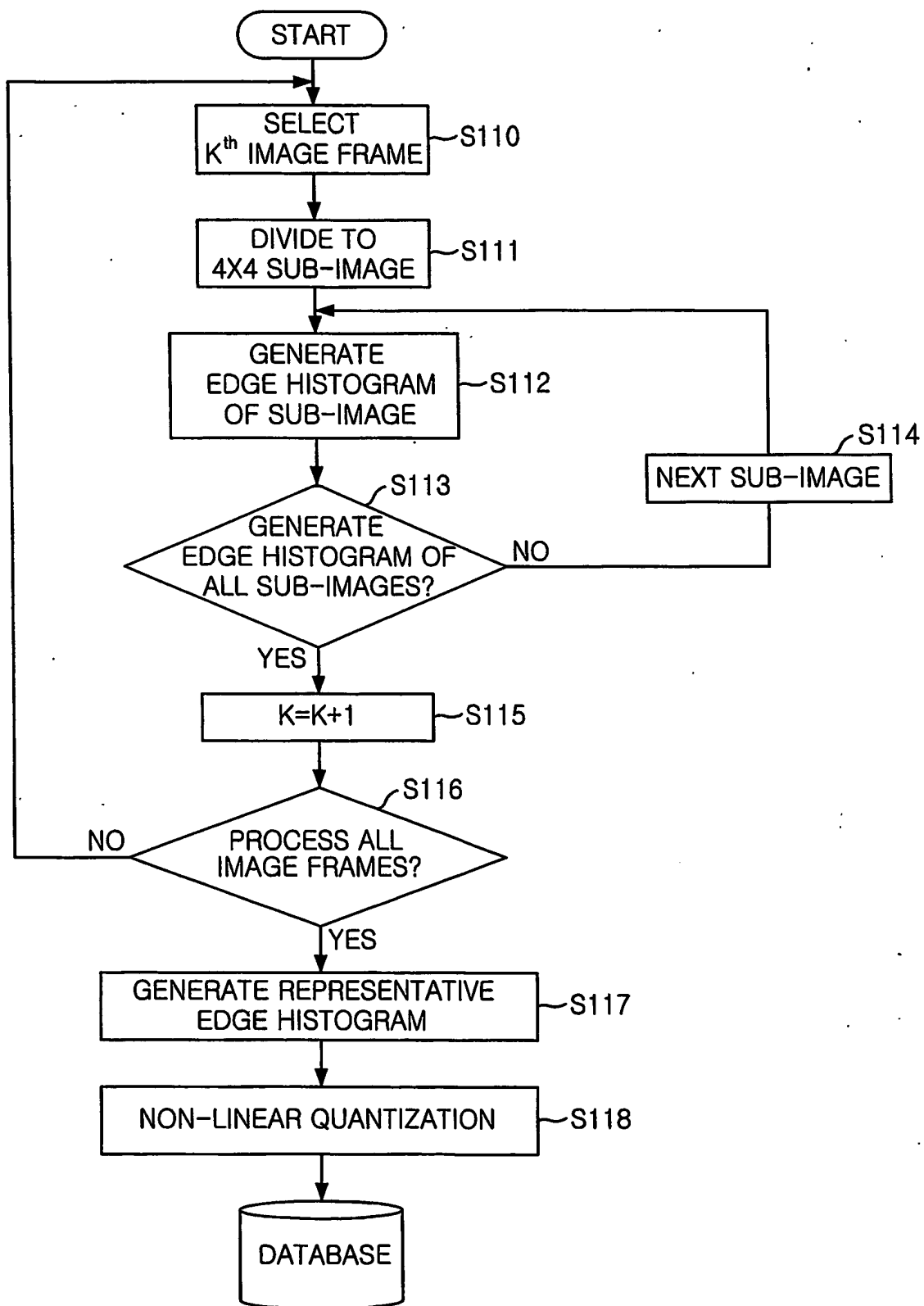
(57) Abstract: A method for constructing a database having digital video data information representing a plurality of video sequence is disclosed. The method includes the steps of: a) partitioning each image frame of each video sequence into L number of sub images; b) generating L number of edge histograms for each image frame; c) normalizing the edge histogram bins to thereby generate M number of normalized edge histogram bins; d) calculating M representative edge histogram bins in order to generate L number of representative edge histograms based on the normalized edge histogram bins; and e) non-linearly quantizing the representative edge histogram bins to generate M number of quantization index values for the each representative edge histogram, to be stored in the database.

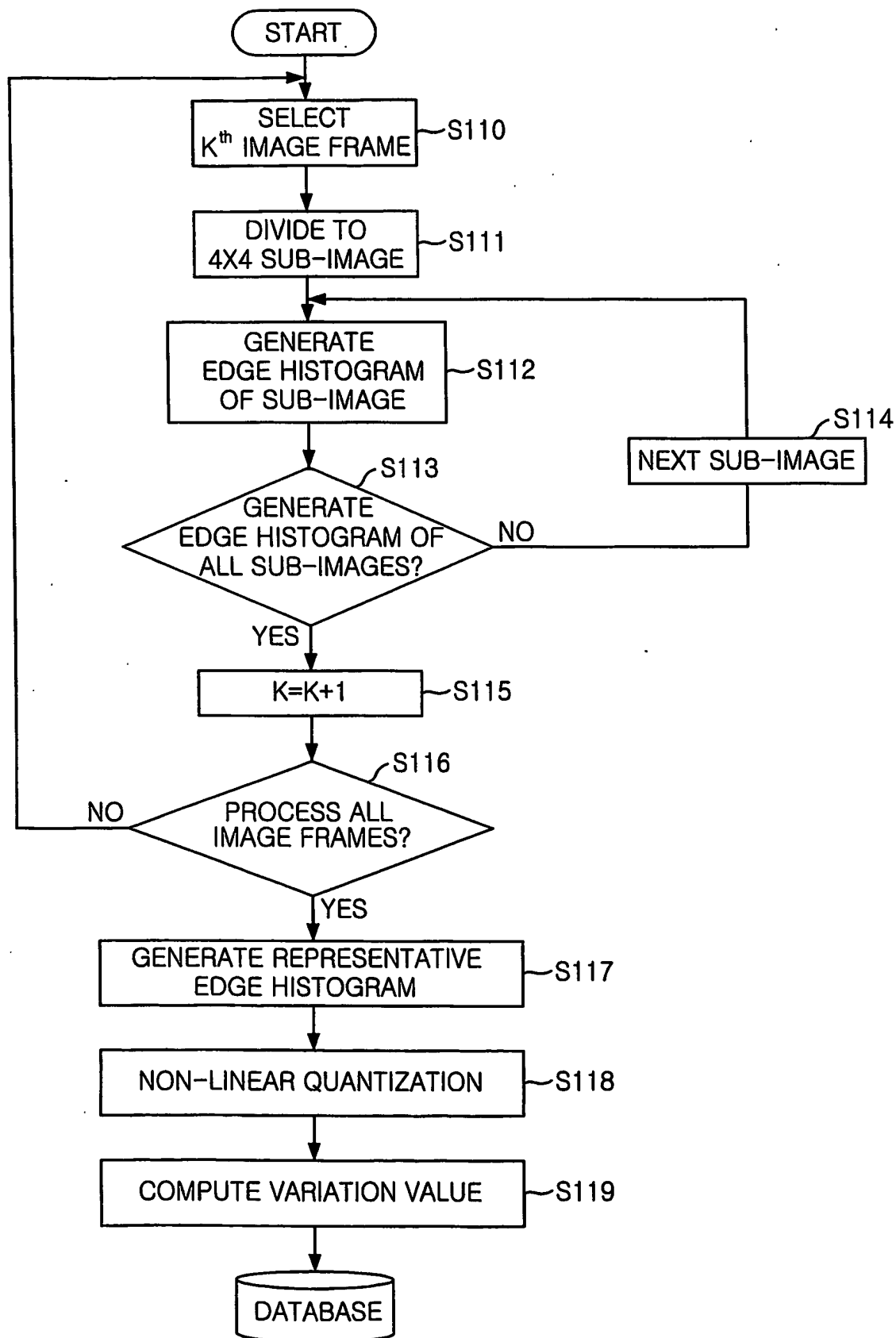
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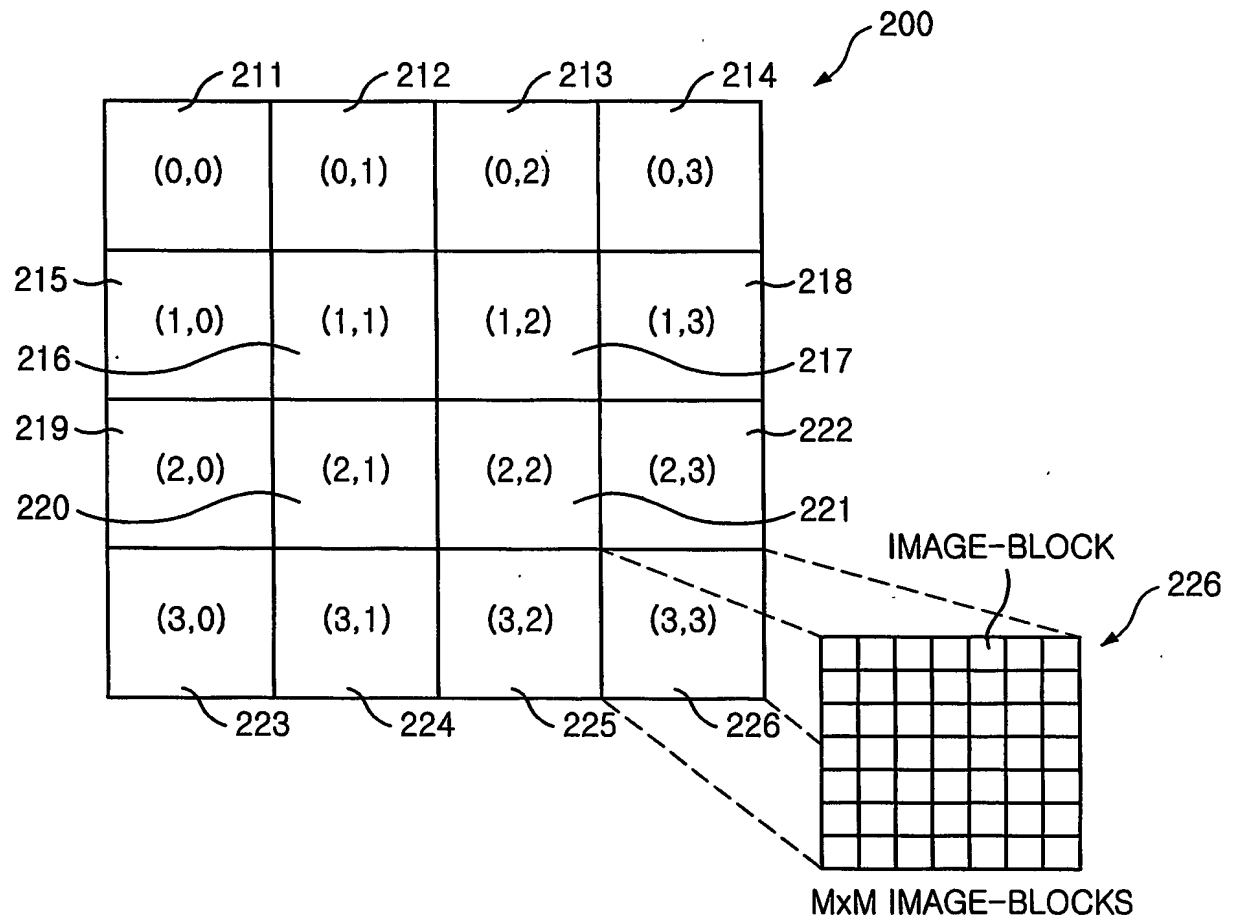
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FIG. 1A

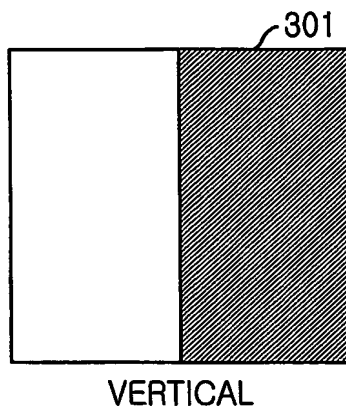


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FIG. 1B

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FIG. 1C

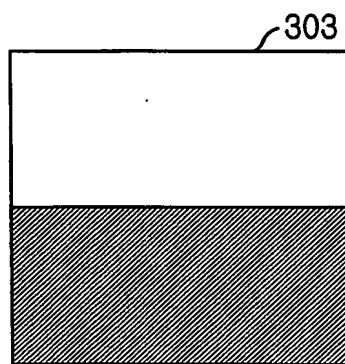
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FIG. 2

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FIG. 3A



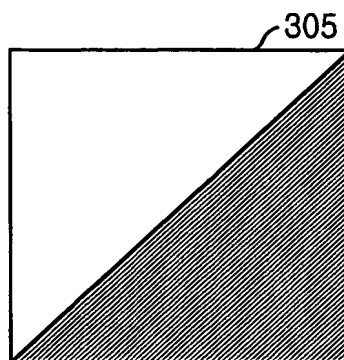
VERTICAL

FIG. 3B



HORIZONTAL

FIG. 3C



45-DEGREE

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FIG. 3D

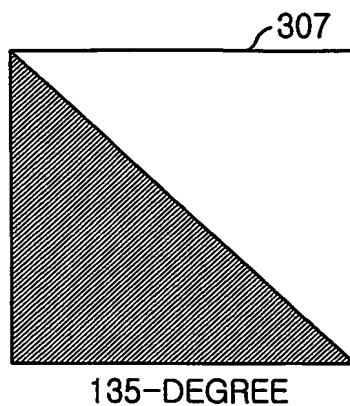
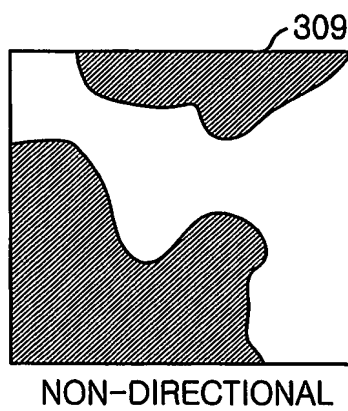


FIG. 3E



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FIG. 4

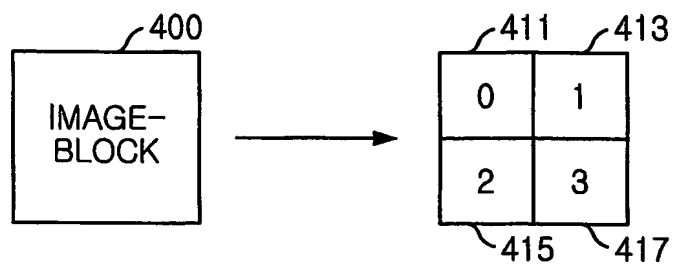


FIG. 5A

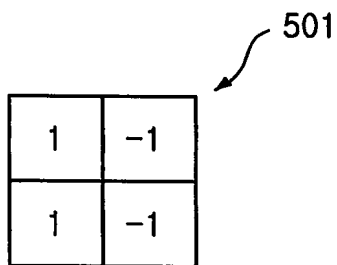
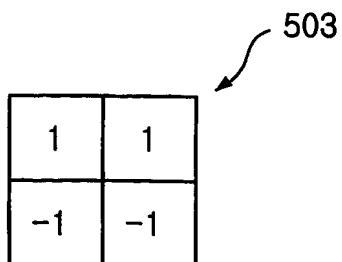


FIG. 5B



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FIG. 5C

505

$S\overline{2}$	0
0	$-S\overline{2}$

FIG. 5D

507

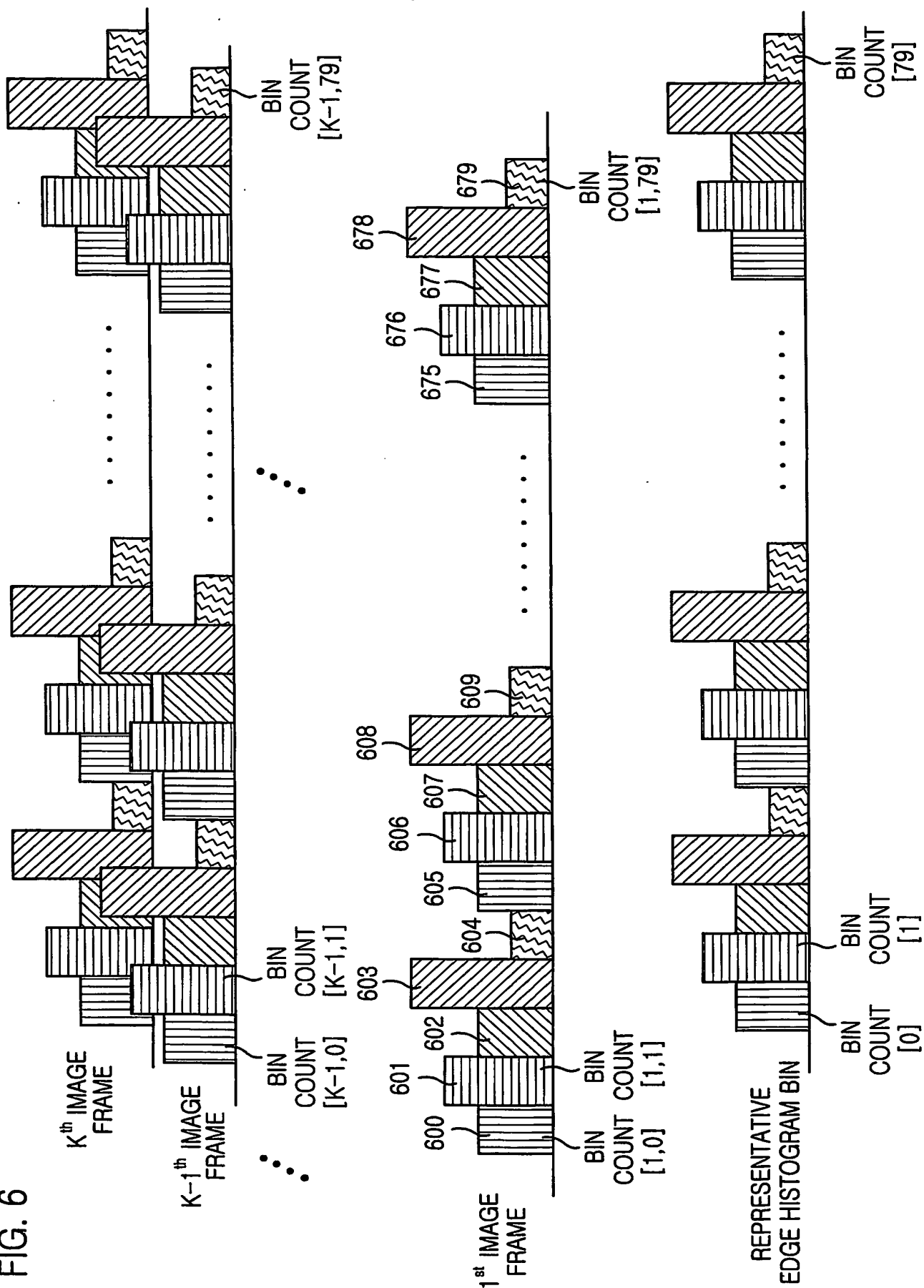
0	$S\overline{2}$
$-S\overline{2}$	0

FIG. 5E

509

2	-2
-2	2

FIG. 6



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FIG. 7

